

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
31 July 2003 (31.07.2003)

PCT

(10) International Publication Number  
**WO 03/063358 A2**

(51) International Patent Classification<sup>7</sup>: **H03M 5/14**,  
G11B 20/14

(21) International Application Number: PCT/IB02/05604

(22) International Filing Date:  
18 December 2002 (18.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02075275.4 23 January 2002 (23.01.2002) EP

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except US*): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

Published:

— without international search report and to be republished upon receipt of that report

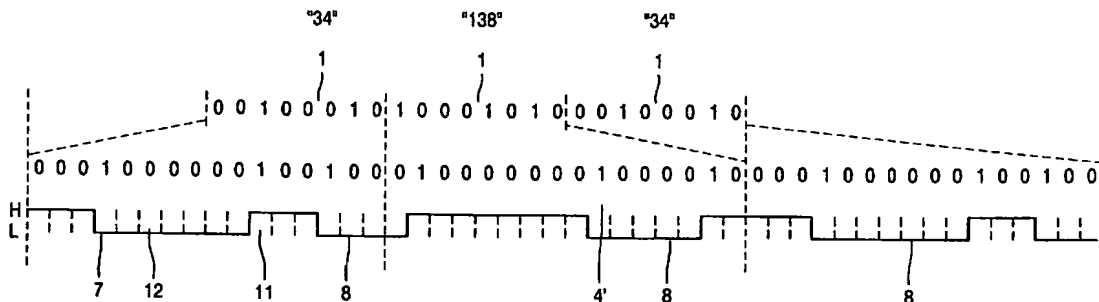
(72) Inventor; and

(75) Inventor/Applicant (*for US only*): SCHOUHAMER IM-MINK, Kornelis, A. [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(74) Agent: DEGUELLE, Wilhelmus, H., G.; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(54) Title: SYSTEM OF CONVERTING INFORMATION WORDS TO A SIGNAL



(57) Abstract: A method of converting m-bit information words to a runlength constrained modulated signal is described. The available code words are distributed over at least one group (G1) of a first type and at least one group (G2) of a second type. The delivery of a code word belonging to the group of the first or second type establishes a coding state of the first type (S1) or one of a number r of coding states (S2, S3) of the second type depending on the current information word. For each information word a subset of code words is available, which subset has at least one disjunct code word for each of the r coding states. The selection from the subset of the code word to be delivered is based on the coding state, on dynamically verifying the runlength constraint for the sequence of code words, and on an additional criterion, like the low frequency content of the modulated signal.